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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,034	11/23/2001	Jack E. Caveney	LCB358A	4452
7590 Jay A. Saltzman Panduit Corp. Legal Department -- TP12 17301 S. Ridgeland Avenue Tinley Park, IL 60477			EXAMINER DUONG, THOMAS	
			ART UNIT 2145	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS			MAIL DATE 04/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/992,034

Applicant(s)

CAVENEY, JACK E.

Examiner

Thomas Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the applicants Amendment filed on January 16, 2007. Applicant canceled *claims 1-29* and added *claims 30-67*. *Claims 30-67* are presented for further consideration and examination.

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). The Examiner cannot find any drawings illustrating the invention as claimed in *claims 60-67*. For example, the Examiner cannot find any drawings of a portable information module (IM), a revision system, and a portable probe as claimed. Please submit the necessary drawings to show every feature of the invention specified in the claims.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed limitations of *claims 30-67* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

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1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 30-50 and 56-59 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over *claims 12-18* of U.S. Patent Application No. 10/969863. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to a method for *"facilitating the installation and revision of communications connections using indicators on active jacks to inform installers and revisors of installation and revision instructions forwarded by a network installation, monitoring, and/or revising system."*
6. Claim 60 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over *claims 26-30* of U.S. Patent Application No. 10/969863. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to an apparatus for *"facilitating the installation*

and revision of communications connections using indicators on active jacks to inform installers and revisors of installation and revision instructions forwarded by a network installation, monitoring, and/or revising system."

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 30-50 and 56-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. With regards to claims 30-50 and 56-59, Applicants recite the limitation,

- *"providing instructions"*

The limitation specified in the above claims renders the claims indefinite. It is unclear "what" is providing the instructions, "what" instructions are being provided, and "what/who" is receiving the instructions. Please clarify the language of the above claims.

10. Claims 51-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. With regards to claims 51-55, Applicants recite the limitation,

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- *“automatically determining”*

The limitation specified in the above claims renders the claims indefinite. It is unclear “what” is performing the determination step. Please clarify the language of the above claims.

Claim Rejections - 35 USC § 101

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims 30-50 and 56-59 are rejected under 35 U.S.C. 101 because the claims are not limited to useful, concrete, and tangible embodiments since *“providing instructions”* for making a configuration change in a LAN comprising a plurality of data ports are not concrete and tangible. As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be amended to include the concrete and tangible embodiments.
14. Claims 51-55 are rejected under 35 U.S.C. 101 because the claims are not limited to useful, concrete, and tangible embodiments since *“automatically determining whether the patch cord is an appropriate length”* for transferring a patch cord between a first data port and a second data port in a LAN to the second data port and a third data port in the LAN are not concrete and tangible. The claims are not limited to useful, concrete, and tangible embodiments because a person in the art can “automatically” determine whether a particular patch cable is long enough to be used to connect another set of data ports. As such, the claim is not limited to statutory subject matter and is therefore

non-statutory. To overcome this type of 101 rejection the claims need to be amended to include the concrete and tangible embodiments.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 30-34, 37-42, 49-50, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartolutti et al. (US006522737B1) and in view of Laor (US006002331A).

17. With regard to claims 30 and 56, Bartolutti discloses,

- *providing instructions to insert a patch cord into or remove a patch cord from a first data port of the subset of the plurality of data ports; and* (Bartolutti, col.1, line 7 – col.6, line 67)

Bartolutti discloses, *"furthermore, paperless work order instruction can be fed directly to the telecommunications closet for a technician to read on-site"*

(Bartolutti, col.4, lines 12-14). Bartolutti discloses, *"since each rack controller 30 has a large display 46, a technician can easily read information by viewing the various rack controller 30. This arrangement also enables technicians to receive paperless work orders"* (Bartolutti, col.6, lines 34-37). In addition, Bartolutti discloses, *"a technician can then read tat work order directly from the displays 46*

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of the rack controllers 30 when at the telecommunications closet. If a technician alters the telecommunications closet in a manner not corresponding to the work order, an error message can be automatically displayed to the technician"

(Bartolutti, col.6, lines 40-45). Hence, Bartolutti teaches of the rack controllers 30 providing to the technician the work orders (i.e., Applicant's providing instructions) via its display 46. The work order may be to connect a patch cord into any connector port 16 or to remove a patch cord from any connector port 16.

However, Bartolutti does not explicitly disclose,

- *of the visual indicators adjacent to the data ports, altering a state of only the visual indicator adjacent to the first data port after the instructions to insert the patch cord into or remove the patch cord from the first data port have been correctly completed, the state being altered before subsequent instructions to insert the patch cord into or remove the patch cord from a second data port have been completed.*

Laor teaches,

- *of the visual indicators adjacent to the data ports, altering a state of only the visual indicator adjacent to the first data port after the instructions to insert the patch cord into or remove the patch cord from the first data port have been correctly completed, the state being altered before subsequent instructions to insert the patch cord into or remove the patch cord from a second data port have been completed. (Laor, col.1, line 7 – col.8, line 54)*

Laor discloses, "also mounted on the brackets proximate to the adapters are rows of light emitting diodes (LED)" (Laor, col.6, lines 12-14). Laor discloses, "also in connection with the controller are the LED's. The LEDs 238 provide a

connection status for adapters 214-228. In the embodiment shown, there are three individual LED's for each side of each adapter. The LED's serve a variety of purposes which will be described in greater detail below" (Laor, col.6, lines 16-21). In addition, Laor discloses, "providing connection status information through the LEDs may assist a technician in establishing correct connections at the communication bulkhead. In one embodiment of the invention, there are three LED's associated with each adaptor and they are red, yellow and green the system operator may program, through the user interface, the desired configuration of the communications panel. When the technician begins making connections according to the pre-programmed configuration, the LED's can be used to inform the technician whether an incorrect or correct connection is made. For example, if the technician makes a correct connection, the controller may be programmed to illuminate the green LED proximate to the adapter in which the connection was just made. Conversely, if an incorrect connection was made, the red LED will illuminate" (Laor, col.6, lines 33-47). Hence, Laor teaches of using the LEDs (i.e., Applicant's visual indicators) to provide connection status information to the technician such as whether the connection made by the technician is correct or incorrect and illuminating the corresponding LED accordingly.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Laor with the teachings of Bartolutti to "[monitor] connections of communications lines including inter alias transmission elements (e.g., lines and adaptors) to be connected, reporting connection status, and/or tracking network connections" (Laor, col.1, line 65 – col.2,

line 1). According to Laor, *"if there has been an error in connecting or reporting connections in a large system, it may be difficult to trace individual cables through a maze-like collection of other cables. Also, it may be difficult to identify the proper adapter to which a particular cable end should be connected or disconnected, or to identify a particular cable end... Thus, ensuring that the proper connections are made can be very time-consuming, and the process is prone to errors in both the making of connections and in keeping records of the connections"* (Laor, col.1, lines 47-60).

18. With regard to claims 31-34, Bartolutti and Laor disclose,

- *further comprising withholding the subsequent instructions until the instructions have been correctly completed.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)
- *wherein the state is altered only after the instructions have been correctly completed.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

Laor discloses, *"When the technician begins making connections according to the pre-programmed configuration, the LED's can be used to inform the technician whether an incorrect or correct connection is made. For example, if the technician makes a correct connection, the controller may be programmed to illuminate the green LED proximate to the adapter in which the connection was just made. Conversely, if an incorrect connection was made, the red LED will illuminate"* (Laor, col.6, lines 39-47).

- *further comprising: providing the subsequent instructions after the instructions have been correctly completed, the second data port belonging to the subset of the plurality of data ports; and of the visual indicators adjacent to the data ports, altering a state of only the visual indicator adjacent to the second data port after the subsequent instructions have been correctly completed.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)
- *further comprising activating the visual indicator associated the second data port only after the instructions have been correctly completed.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

19. With regard to claims 37-38, Bartolutti and Laor disclose,

- *further comprising altering the state differently depending on whether the instructions have been correctly or incorrectly completed.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

Laor discloses, “When the technician begins making connections according to the pre-programmed configuration, the LED's can be used to inform the technician whether an incorrect or correct connection is made. For example, if the technician makes a correct connection, the controller may be programmed to illuminate the green LED proximate to the adapter in which the connection was just made. Conversely, if an incorrect connection was made, the red LED will illuminate” (Laor, col.6, lines 39-47).

- *further comprising altering a state of a visual indicator on the patch cord at least one of in same manner or at the same time as a visual indicator not on the patch cord.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

20. With regard to claim 39, Bartolutti and Laor disclose,

- *further comprising providing a plurality of visual indicator states that are different from each other and that include a first visual indicator state before insertion into the first data port, a second visual indicator state before removal from the first data port, a third visual indicator state after correct insertion into the first data port, and a fourth visual indicator state after incorrect removal from the first data port. (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)*
- Laor discloses, “providing connection status information through the LEDs may assist a technician in establishing correct connections at the communication bulkhead. In one embodiment of the invention, there are three LED's associated with each adaptor and they are red, yellow and green the system operator may program, through the user interface, the desired configuration of the communications panel. When the technician begins making connections according to the pre-programmed configuration, the LED's can be used to inform the technician whether an incorrect or correct connection is made. For example, if the technician makes a correct connection, the controller may be programmed to illuminate the green LED proximate to the adapter in which the connection was just made. Conversely, if an incorrect connection was made, the red LED will illuminate” (Laor, col.6, lines 33-47).

21. With regard to claims 40-42, Bartolutti and Laor disclose,

- *further comprising targeting only data ports having activated visual indicators, the targeting comprising: scanning the data ports having activated visual indicators;*

analyzing the data ports having activated visual indicators to determine whether the instructions or the subsequent instructions have been correctly or incorrectly completed; and limiting at least one of the scanning and analyzing to only the data ports having activated visual indicators. (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

Laor discloses, *“the user interface allows the system operator to make inquiries and receive information back as to the connection status of the communications system and to identify elements that are to be connected”* (Laor, col.5, lines 56-59). In addition, Bartolutti discloses, *“accordingly, by connecting a computer controller to the various sensors in each rack, the computer controller can monitor all changes to the patch cord interconnections within that rack. The computer controllers can be joined together in a network. The network monitors the status of all the connector ports on all the racks. Accordingly, the data on the network contains the full status of the telecommunications closet”* (Bartolutti, col.3, lines 58-65).

- *further comprising initiating the targeting from scanning and analysis of at least all data ports using a manually-activated input.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)
- *further comprising automatically terminating the targeting and returning to scanning and analysis of at least all data ports.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)

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22. With regard to claims 49-50, Bartolutti and Laor disclose,

- *further comprising initiating determination of whether the instructions have been correctly completed using a manually-activated input. (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)*
- *further comprising limiting directions to the first data port to a general location until a manually-activated input is activated. (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54)*

23. Claims 35-36, 43-48, and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartolutti et al. (US006522737B1), in view of Laor (US006002331A), and further in view of German et al. (US006285293B1).

24. With regard to claims 35-36, Bartolutti and Laor disclose,

See *claim 33* rejection as detailed above.

However, Bartolutti and Laor do not explicitly disclose,

- *further comprising activating the visual indicators adjacent to the first and second data ports prior to the patch cord being inserted into or removed from the first data port.*
- *further comprising, of the visual indicators adjacent to the first and second data ports, activating only the visual indicator adjacent to the first data port prior to the patch cord being inserted into or removed from the first data port.*

German teaches,

- *further comprising activating the visual indicators adjacent to the first and second data ports prior to the patch cord being inserted into or removed from the first data port. (German, col.1, line 7 – col.8, line 54)*

German discloses, “for instance, suppose a technician wants to find the opposite end of a particular patch cord. That technician can press the trace button 38 that corresponds in position to the known end of the patch cord. Upon the pressing of the trace button 38, the CPU 50 will review its own log and will determine where the opposite end of that patch cord is located. The CPU 50 will then light the LED 40 that corresponds in position to the opposite end of the targeted patch cord. The technician then need only to look for the lit LED 40 on one of the tracing interface modules 34 to find the opposite end of the targeted patch cord” (German, col.5 lines 51-61). Hence, German teaches of lighting the corresponding LEDs (i.e., Applicant’s visual indicators) indicating the ends of the targeted patch cord in order to assist the technician in locating the targeted patch cord easily.

- *further comprising, of the visual indicators adjacent to the first and second data ports, activating only the visual indicator adjacent to the first data port prior to the patch cord being inserted into or removed from the first data port. (German, col.1, line 7 – col.8, line 54)*

German discloses, “for instance, suppose a technician wants to find the opposite end of a particular patch cord. That technician can press the trace button 38 that corresponds in position to the known end of the patch cord. Upon the pressing of the trace button 38, the CPU 50 will review its own log and will determine where the opposite end of that patch cord is located. The CPU 50 will then light the

LED 40 that corresponds in position to the opposite end of the targeted patch cord. The technician then need only to look for the lit LED 40 on one of the tracing interface modules 34 to find the opposite end of the targeted patch cord" (German, col.5 lines 51-61). Hence, German teaches of lighting the corresponding LEDs (i.e., Applicant's visual indicators) indicating the ends of the targeted patch cord in order to assist the technician in locating the targeted patch cord easily.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of German with the teachings of Bartolutti and Laor to *"trace and identify the ends of each patch cord in a telecommunications closet in an automated fashion, thereby reducing the labor and inaccuracy of manual tracing procedures"* (German, col.3, lines 12-16).

25. With regard to claims 43-45, Bartolutti, Laor, and German disclose,

- *further comprising: providing directions to a general location of the first data port; and activating the visual indicator adjacent to the first data port only after an end of the patch cord is inserted into a local system port at the general location or an IM port of a portable information module (IM), the local system port having a different functionality than any of the data ports.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)
- German discloses, *"in addition to lighting the LEDs 40 to show the ends of the various patch cords, the rack controller 30 may also display instructions or useful information on its display 52 with the use of, for example, alpha numeric characters. For example, the location of a patch cord by rack number and patch*

panel may be displayed. Alternatively, the identity of the patch cord may be displayed, thereby helping a technician verify that he/she is servicing the correct patch cord" (German, col.5, line 64 – col.6, line 4).

- *wherein the end of the patch cord to be inserted into the first data port and an end of the patch cord to be inserted into the local system port or IM port are the same.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)
- *further comprising providing additional directions to the first data port after the end of the patch cord is inserted into the local system port or the IM port.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

26. With regard to claims 46-48, Bartolutti, Laor, and German disclose,

- *further comprising: providing directions to a general location of the first data port; and altering the state only after an end of the patch cord is inserted into a local system port at the general location or an IM port of a portable information module (IM), the local system port having a different functionality than any of the data ports.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

German discloses, *"in addition to lighting the LEDs 40 to show the ends of the various patch cords, the rack controller 30 may also display instructions or useful information on its display 52 with the use of, for example, alpha numeric characters. For example, the location of a patch cord by rack number and patch panel may be displayed. Alternatively, the identity of the patch cord may be*

displayed, thereby helping a technician verify that he/she is servicing the correct patch cord" (German, col.5, line 64 – col.6, line 4).

- *wherein the end of the patch cord inserted into the local system port or IM port and an end of the patch cord inserted into the first data port are different.*

(Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

- *further comprising providing additional directions to the first data port after the end of the patch cord is inserted into the local system port or the IM port.*

(Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

27. With regard to claims 57-59, Bartolutti, Laor, and German disclose,

- *further comprising: providing directions to a general location of at least one of the first or second data port; providing further directions to the at least one of the first or second data port only after an end of the patch cord is inserted into a local system port at the general location or an IM port of a portable information module (IM), the local system port having a different functionality than any of the data ports.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

German discloses, "in addition to lighting the LEDs 40 to show the ends of the various patch cords, the rack controller 30 may also display instructions or useful information on its display 52 with the use of, for example, alpha numeric characters. For example, the location of a patch cord by rack number and patch panel may be displayed. Alternatively, the identity of the patch cord may be

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displayed, thereby helping a technician verify that he/she is servicing the correct patch cord" (German, col.5, line 64 – col.6, line 4).

- *wherein the patch cord comprises the separable visual indicator.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)
- *wherein a portable device comprises the separable visual indicator, the portable device further comprising a display and a manually-activated input.* (Bartolutti, col.1, line 7 – col.6, line 67; Laor, col.1, line 7 – col.8, line 54; German, col.1, line 7 – col.8, line 54)

28. Claims 51-55 and 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czosnowski et al. (US005764043) and in view of what was well known in the art.

29. With regard to claims 51 and 60-61, Czosnowski discloses,

- *a method of transferring a patch cord between a first data port and a second data port in a local area network (LAN) to the second data port and a third data port in the LAN; (preamble)* (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)
Czosnowski discloses, "after the original installation of a patch cord, it may be necessary or desirable to either reposition an end of the patch cord or it may be necessary to replace an entire patch cord... As is apparent, the end of the patch cord opposite to the connection of supply unit 126 can then be disconnected and reconnected to a different desired receptacle, or the entire path cord can be replaced" (Czosnowski, col.8, lines 32-50). Hence, Czosnowski teaches a

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method of identifying the targeted cable, removing and repositioning or replacing the cable accordingly.

Including wherein,

- at least one of: automatically determining whether the patch cord is an appropriate length for establishing a connection between the second and third data ports before the patch cord is removed from the first data port; or providing a manually-activated input to indicate that the patch cord is not the appropriate length for establishing the connection between the second and third data ports;
Examiner takes Official Notice (see MPEP 2144.03 Reliance on "Well Known" Prior Art) that the concept and advantages of "automatically determining whether the patch cord is an appropriate length for establishing a connection between the second and third data ports before the patch cord is removed from the first data port" was well-known and expected/a well-known practice/a well-known standard in the art at the time of invention. For instance, when a technician arrives at the location of the patch cable to be removed for repositioning and/or replacing, the technician would "automatically" determine whether the existing cable is long enough for the repositioning to another pair of receptacles by visually examining and corresponding distances.
- and providing different instructions depending on whether the patch cord is or is not the appropriate length.

Examiner takes Official Notice (see MPEP 2144.03 Reliance on "Well Known" Prior Art) that the concept and advantages of "automatically determining whether the patch cord is an appropriate length for establishing a connection between the second and third data ports before the patch cord is removed from the first data

port" was well-known and expected/a well-known practice/a well-known standard in the art at the time of invention. For instance, upon visually examining and determining that the existing cable is long enough for the repositioning, the technician would automatically repositioning the cable as required, and vice versa.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Laor with the teachings of Czosnowski to *provide a system for locating corresponding ends of a patch cord which allows easy, efficient and clear locations of such ends*" (Czosnowski, col.3, lines 13-15).

30. With regard to claims 52-55, Czosnowski and what was well known in the art disclose,

- *wherein the manually-activated input is disposed on a portable device.*
(Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)
- *further comprising providing the different instructions independent of whether the acknowledgment is activated before the patch cord is removed from the first data port or after the patch cord is removed from the first data port and before the patch cord is inserted into the third data port.* (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)
- *further comprising indicating an optimal patch cord length if the patch cord is not the appropriate length.* (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)
- *further comprising providing fewer instructions if the patch cord is the appropriate length than if the patch cord is not the appropriate length.* (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

31. Claims 63-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czosnowski et al. (US005764043) and in view of Laor (US006002331A).

32. With regard to claims 63, Czosnowski discloses,

- a housing; (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

Czosnowski discloses, *"unit 126 has a portable housing 136 which preferably contains a 9-volt battery source. A probe 138 extends from housing 136 via a power cord 140. Probe 138 has a removable end 142, as shown in FIGS. 13 and 14"* (Czosnowski, col.7, lines 39-43). Hence, Czosnowski teaches of a housing 136 (i.e., Applicant's housing) of a portable unit.

- a probe cable extending from the housing and having a probe plug at a remote end, the probe plug configured to cooperate with a system outlet of a rack in a local area network (LAN); (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

Czosnowski discloses, *"unit 126 has a portable housing 136 which preferably contains a 9-volt battery source. A probe 138 extends from housing 136 via a power cord 140. Probe 138 has a removable end 142, as shown in FIGS. 13 and 14"* (Czosnowski, col.7, lines 39-43). In addition, Czosnowski discloses, *"system 30 is used to locate corresponding ends of a patch cord 32 which connects telecommunication distribution frames 34 and 36... Each frame 34 or 36 includes a plurality of receptacles 38 which are used to connect the ends of patch cord 32 to the interior workings of the frame"* (Czosnowski, col.5, lines 818).

Hence, Czosnowski teaches of a probe 138 (i.e., Applicant's probe cable) of a portable unit including a probe end 142 (i.e., Applicant's probe plug) for

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connecting with the receptacles 38 (i.e., Applicant's system outlet) of distribution frames 34 and 36 (i.e., Applicant's rack in a LAN).

- *a probe element configured to provide contact with the LAN through a different type of connector than the probe plug; (Czosnowski, col.1; line 7 – col.10, line 51; fig.1-25)*

Czosnowski discloses, *"unit 126 has a portable housing 136 which preferably contains a 9-volt battery source. A probe 138 extends from housing 136 via a power cord 140. Probe 138 has a removable end 142, as shown in FIGS. 13 and 14"* (Czosnowski, col.7, lines 39-43). In addition, Czosnowski discloses, *"system 30 is used to locate corresponding ends of a patch cord 32 which connects telecommunication distribution frames 34 and 36... Each frame 34 or 36 includes a plurality of receptacles 38 which are used to connect the ends of patch cord 32 to the interior workings of the frame"* (Czosnowski, col.5, lines 818).

Hence, Czosnowski teaches of a probe 138 (i.e., Applicant's probe cable) of a portable unit including a probe end 142 (i.e., Applicant's probe element, probe plug) for connecting with the receptacles 38 (i.e., Applicant's a different type of connector than the probe plug) of distribution frames 34 and 36 (i.e., Applicant's rack in a LAN).

- *at least one of a button or key configured to input information to the system; (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)*

Czosnowski discloses, *"housing 136 of unit 126 can have an LED disposed of its upper surface to indicate when switch 154 has been thrown"* (Czosnowski, col.8, lines 11-13). Hence, Czosnowski teaches of a switch 154 (i.e., Applicant's button or key) located on the portable unit.

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- *a signal light having different states to indicate at least one of the presence of new instructions on the display or whether a patch cord plug has been correctly inserted into or removed from a data port of the rack; and (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)*

Czosnowski discloses, “by actuating switch 154 on unit 126, a voltage is supplied across LEDs 78 and a current runs through the circuit formed by connection of the ends of patch cord 32. Thus, current passing through LEDs 78 will cause them to light up. Preferably, LEDs 78 will be constructed to blink upon the passage of current therethrough such that each of the connected ends of patch cord 32 will have an associated blinking LED” (Czosnowski, col.7, line 62 – col.8, line 2). Hence, Czosnowski teaches of an LED 78 (i.e., Applicant’s signal light) located on the portable unit lighting up to indicate the connected patch cords via their patch ports and indicated by the associated LEDs.

- *an illumination light configured to illuminate an area adjacent to the probe element. (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)*

Czosnowski discloses, “housing 136 of unit 126 can have an LED disposed of its upper surface to indicate when switch 154 has been thrown” (Czosnowski, col.8, lines 11-13). Hence, Czosnowski teaches of an LED (i.e., Applicant’s illumination light) located on the portable unit.

However, Czosnowski does not explicitly disclose,

- *a display on the housing configured to convey information about at least one of the revision system, revision steps, or patch cord specifications during a revision process;*

Laor teaches,

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- *a display on the housing configured to convey information about at least one of the revision system, revision steps, or patch cord specifications during a revision process; (Laor, col.1, line 7 – col.8, line 54)*

Laor discloses, *"the present invention is directed to an apparatus and method for monitoring connections of communications lines including inter alias transmission elements (e.g., lines and adaptors) to be connected, reporting connection status, and/or tracking network connections"* (Laor, col.1, line 64 – col.2, line 1). In addition, Laor discloses, *"the user interface allows the system operator to make queries and receive information back as to the connection status of the communications system and to identify elements that are to be connected"* (Laor, col.5, lines 56-59). Hence, Laor teaches of an apparatus allowing the operator to monitor (i.e., Applicant's convey information) the connection status of the communications systems and to identify the elements to be connected.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Laor with the teachings of Czosnowski to *"[monitor] connections of communications lines including inter alias transmission elements (e.g., lines and adaptors) to be connected, reporting connection status, and/or tracking network connections"* (Laor, col.1, line 65 – col.2, line 1). According to Laor, *"if there has been an error in connecting or reporting connections in a large system, it may be difficult to trace individual cables through a maze-like collection of other cables. Also, it may be difficult to identify the proper adapter to which a particular cable end should be connected or disconnected, or to identify a particular cable end... Thus, ensuring that the proper connections are made can be very time-consuming, and the process is prone to errors in both the*

making of connections and in keeping records of the connections” (Laor, col.1, lines 47-60).

33. With regard to claims 64-65, Czosnowski and Laor disclose,

- *wherein the probe comprises a single probe element configured to cooperate with both a port plate of the rack and a plug plate of the patch cord plug.*

(Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

Czosnowski discloses, “a further object of this invention is to provide a patch cord coupling assembly which allows easy and efficient connection of conductive members in the patch cord cable to an indicator member connected to the receptacle.” (Czosnowski, col.3, lines 32-35).

- *wherein the probe comprises a first probe element to cooperate with only a port plate of the rack and a second probe element to cooperate with only a plug plate of the patch cord plug. (Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)*

Czosnowski discloses, “a further object of this invention is to provide a patch cord coupling assembly which allows easy and efficient connection of conductive members in the patch cord cable to an indicator member connected to the receptacle.” (Czosnowski, col.3, lines 32-35).

34. With regard to claims 66-67, Czosnowski and Laor disclose,

- *wherein the probe elements emanate from different places in the housing.*

(Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

Czosnowski discloses, “a further object of this invention is to provide a patch cord coupling assembly which allows easy and efficient connection of conductive

members in the patch cord cable to an indicator member connected to the receptacle.” (Czosnowski, col.3, lines 32-35). Czosnowski discloses, “unit 126 has a portable housing 136 which preferably contains a 9-volt battery source. A probe 138 extends from housing 136 via a power cord 140. Probe 138 has a removable end 142, as shown in FIGS. 13 and 14” (Czosnowski, col.7, lines 39-43). In addition, Czosnowski discloses, “system 30 is used to locate corresponding ends of a patch cord 32 which connects telecommunication distribution frames 34 and 36... Each frame 34 or 36 includes a plurality of receptacles 38 which are used to connect the ends of patch cord 32 to the interior workings of the frame” (Czosnowski, col.5, lines 818).

- *wherein the probe elements diverge from a common connector to the housing.*
(Czosnowski, col.1, line 7 – col.10, line 51; fig.1-25)

Czosnowski discloses, “a further object of this invention is to provide a patch cord coupling assembly which allows easy and efficient connection of conductive members in the patch cord cable to an indicator member connected to the receptacle.” (Czosnowski, col.3, lines 32-35). Czosnowski discloses, “unit 126 has a portable housing 136 which preferably contains a 9-volt battery source. A probe 138 extends from housing 136 via a power cord 140. Probe 138 has a removable end 142, as shown in FIGS. 13 and 14” (Czosnowski, col.7, lines 39-43). In addition, Czosnowski discloses, “system 30 is used to locate corresponding ends of a patch cord 32 which connects telecommunication distribution frames 34 and 36... Each frame 34 or 36 includes a plurality of receptacles 38 which are used to connect the ends of patch cord 32 to the interior workings of the frame” (Czosnowski, col.5, lines 818).

Response to Arguments

35. Applicant's arguments with respect to *claims* 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

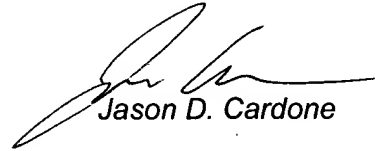
36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where

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this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

April 9, 2007

A handwritten signature in black ink, appearing to read 'Jason D. Cardone', is written over the printed name.

Jason D. Cardone

Supervisory PE (AU2145)